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Finding Out What Employees Are Thinking¹

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McKinsey, Wellington & Company

IT IS generally recognized that the morale of employees is closely related to their productiveness. Hence, if management can determine the true nature, extent and causes of dissatisfaction, constructive corrections can be made which will increase profits. Most employers would like to know what their employees are thinking in order that they may make these changes.

Employers seldom have this information, however, because few workers have the courage to tell the "boss" just how they feel. As a result, management often guesses at employee attitudes, or worse yet, either takes an ostrich-like position or decides to "let sleeping dogs lie." Many grievances which could easily have been eliminated at their inception are in consequence allowed to magnify in the workman's mind until they result in slower work, poorer quality, higher costs, and, possibly, eventual outbreak of labor difficulties.

There is another important reason for the maintenance of favorable employee attitudes. Business enterprises are no longer judged in terms of products, services, and profits alone. Employee dissatisfaction today quickly finds its way into trade and customer channels, influencing the acceptance of the company, the salesman and the products. Progressive companies are showing increasing interest in finding what their employees think because of its bearing upon public relations.

The purpose of this paper is to outline in non-technical terms the methods which have been found successful

¹In the preparation of this paper, the assistance of Gordon G. Bowen and J. Alexander Smith of McKinsey, Wellington & Company, is gratefully acknowledged.

in learning what employees are thinking, to disclose some attitudes that have been revealed by applying these methods in a typical study, and to indicate changes in industrial relations practice that appear necessary if certain of these employee attitudes toward the company and its operations and policies are to be improved.

Methods of Measuring Attitudes

In recent years, psychologists and other research workers have developed practical techniques for measuring attitudes. These procedures have been adapted to industry and have been applied successfully in a number of companies. As a result, methods of finding out what employees think and what are the causes and effects of employee attitudes have been greatly improved.

The methods of studying employee attitudes may be grouped into two major classifications: interviews and questionnaires. In order to obtain satisfactory results, both must be administered in a way to assure the employees of anonymity.

The Interview

Interview methods range from the informal "impressionistic" interview to what is known as the "controlled" interview. The informal impressionistic interview method is, of course, desirable in all situations. Most personnel men, foremen, plant superintendents, and other executives use it constantly. This method is indispensable in the day-to-day control of human relations.

Another type of informal interview is the "unguided"

Quotation of statistics and other material in this publication is permitted when due credit is given to THE CONFERENCE BOARD

interview by a research worker trained in interviewing techniques. Each interview is as informal as possible. The interviewer does very little talking, but rather records what the employee has to say.

The controlled interview may vary from one which is almost entirely unguided to one which is a formal interrogation. For example, in a partially-controlled interview, the interviewer may make certain that a few carefully selected subjects are commented upon by each employee, while in the fully controlled interview, the employee answers only certain specific questions.

The Questionnaire

There are a number of variations of the questionnaire method. At one extreme there is a simple set of informal questions which the employee answers in his own words, and at the other the carefully constructed "attitude scale." In between, there is the questionnaire providing "multiple-choice" answers to be checked.

A simple set of general questions can, of course, be constructed by any executive and submitted to employees with the request that they write out and submit their answers unsigned. This method has been used by a number of companies, but for several reasons the results have not always been satisfactory. Employees are not always able to express their attitudes clearly in writing. Often they do not distinguish the true underlying causes of their discontent. They frequently fear that their handwriting will be recognized by the management. An improper phrasing of questions by one unskilled in questionnaire design may invalidate the answers, because, in such cases, adequate statistical treatment and interpretation of the results are not possible.

The questionnaire with multiple-choice answers is vastly superior to one with only a simple set of informal questions. The employee checks the answers with which he agrees; he need not do any writing. The number and per cent of employees checking each answer can be tabulated. The answers to a given set of questions relating to one aspect of personnel policy, such as wages, will indicate not only the direction but also the degree of the attitude toward that specific practice.

The Attitude Scale

One of the most accurate methods of measuring general morale, and also attitudes toward specific personnel practices, is the attitude scale. Although used to some extent in educational institutions, this method has had only a limited application in industry. It has been utilized, however, with very satisfactory results in several companies. By means of this scale, accurate comparisons can be made between departments, plants, and even companies. Use of the same attitude scale periodically provides a measure of progress of the industrial relations program.

Combination of Methods

A combination of an attitude scale and questions with multiple-choice answers is usually desirable. This type of questionnaire gives the management a measure of general morale as well as the attitudes toward each specific personnel policy and procedure. Properly administered, it provides a complete and timely cross-section of what the employees are thinking on all aspects of the industrial relations program, whereas interviews can furnish only an incomplete sampling of employee opinion at any given time.

Construction of an Attitude Scale

In constructing an attitude scale a number of single-sentence statements are prepared. These should range from some markedly unfavorable in attitude toward the company and its personnel practices to some extremely favorable, all phrased in the language of rank-and-file workers. Each statement, by means of appropriate statistical techniques, is given a definite scale value. The employees are asked to check the statements with which they agree. It is thus possible, by scoring the questionnaire on the basis of the attitude scale values, to determine the individual employee's attitude score and the average morale "score" of the group of which he is a member.

Several statements taken from an attitude scale¹ are presented below:

ATTITUDE STATEMENT	SCALE VALUE (FACTOR 10)
I am made to feel that I am really a part of this organization.....	9.72
I can feel reasonably sure of holding my job as long as I do good work.....	8.33
I can usually find out how I stand with my boss...	7.00
On the whole, the company treats us about as well as we deserve.....	6.60
I think training in better ways of doing the job should be given to all employees of the company.....	4.72
I have never understood just what the company's personnel policy is.....	4.06
In my job, I don't get any chance to use my experience.....	3.18
I can never find out how I stand with my boss....	2.77
A large number of the employees would leave here if they could get as good jobs elsewhere.....	1.67
I think the company's policy is to pay employees just as little as it can get away with.....	0.80

The above examples are taken from an attitude scale consisting of fifty statements arranged in haphazard order in the questionnaire. Instructions were printed, requesting the employee to check only those statements with which he agreed.

An attitude scale of the type described can be used to measure the general morale of various classifications

¹The range of values in the attitude scale, while statistically reliable, must be recognized as arbitrary. For the purpose of interpreting results, therefore, it will help to multiply each scale value by 10 and to think of the possible scores as ranging roughly from 0 to 100.

of employees by asking them to check their sex, length of service, and salary range on the questionnaire and by submitting the questionnaire to one department at a time. A statistical study can then be made of general morale on the basis of department, type of pay (salaried or hourly), income groups, sex, and length of service. When the same attitude scale is used in several companies, intercompany comparison of morale is made possible.

In addition to its use as a measure of general morale, the attitude scale can be used to some extent to measure attitudes toward specific personnel practices, because some of the statements in the scale relate to specific factors as well as to general morale. It will usually be desirable, however, to supplement the attitude scale with a number of questions relating to the various specific factors in the industrial relations program of the company. Multiple-choice and yes-no answers can be constructed for these questions.

Specific Attitude Questions

It is not practicable in this paper to outline the pitfalls to be avoided and the techniques which have been found successful in constructing specific attitude questions. As indicated previously, improper questionnaire design may invalidate the results of the study. For example, leading questions should be avoided, because they anticipate and, to some extent, control the answers. Also questions that are vague or not phrased in the language of the worker may lead to erroneous conclusions.

Various types of answers can be designed, including those known as multiple-choice, true-false, yes-no, completion, and the like. An example of a question with multiple-choice answers is the following:

Who do you think *owns* your company? (Check the *one* answer you agree with)

- A few large stockholders.
- Thousands of stockholders.
- Another corporation.
- Bankers.

Simple lists of items (e. g., various items of working conditions) may be included, so that the employee can check those which he considers to be satisfactory and those which he believes should be improved. An employee may be asked to rank in the order of importance a number of factors; for example, those which he thinks should govern promotions, lay-offs, and reemployment. Also, the employee's knowledge of certain information which has been disseminated to him may be tested. These and many other ingenious questions, with answers to be checked, can be designed on the basis of the specific aspects of the company's industrial relations program.

In addition to the attitude scale and the questions relating to specific personnel practices, the employee

may be given an opportunity to express in his own words on a blank page of the questionnaire any comments, criticisms, grievances, or suggestions which he considers are not adequately covered elsewhere in the questionnaire.

Administering the Questionnaire

It has been our experience that the best results are obtained when the questionnaire is administered on company time to employees in departmental groups. Every possible precaution must be observed to assure the employee that his anonymity is properly protected. The purpose of the questionnaire should be explained frankly to the workers. It should be emphasized that they are not to sign their names; but it should be explained to them that, for purposes of statistical comparison, check marks are requested as to sex, length of service, and, possibly, earnings.

A carton with a slit in the top resembling a ballot box should be placed in the back of the room. Employees should be asked to drop their questionnaires into this box. In one company, the cartons were affixed with the seal of the consulting firm conducting the project; and the employees were assured that no one in the company would see the completed questionnaires. It was stated that the management would see only the summaries by departments, sex, length of service and earnings. No one from the immediate line supervision should be present when the questionnaires are filled out by the employees.

Statistical Treatment of Results

The general morale of each employee is determined by scoring the attitude statements; and the average morale score of the various classifications of employees (i. e., by department, sex, length of service, and earnings) is then calculated.

Next, tabulations are made of the number and percentage of each classification of employees checking questions relating to specific factors in the industrial relations program. In this manner the efficacy of various practices is established and the need for revision in present practices or installation of new practices determined; for example, supervision, wage and salary administration, opportunities for advancement, working conditions, and the like.

Finally, the effect on general morale of the attitudes toward specific industrial relations practices is determined. For example, the difference in average morale scores between the employees checking a favorable answer to a specific question and those checking an unfavorable answer to this question, divided by what is called by statisticians the "standard deviation of the difference," indicates the relative value of that specific factor as a determinant of general morale. Thus, it is possible to rank the various specific factors in the com-

pany's personnel program in the order of their significance as determinants of general morale.

Typical Results of An Attitude Study

A questionnaire similar to one which has been described was administered to more than 1,000 employees in selected office and factory departments of a manufacturing company. Some of the significant results are as follows:

General Morale Scores

In this manufacturing company there was a range in average departmental morale score from 45.9 in the lowest department to 69.4 in the highest, with an average morale of 57.1 for all employees. These differences in scores are highly significant statistically. A further analysis revealed that these variations in morale were due largely to differences in supervision and leadership. It seemed desirable, therefore, for this company to concentrate on improving the quality of the management in the departments with lowest morale, as well as to give attention, of course, to improving the morale in all departments.

A number of comparisons in average morale on the basis of such classifications as sex, length of service, earnings and type of work are shown graphically in Chart 1. The average morale score of all salaried employees was 57.5 and of the hourly workers 56.0. The

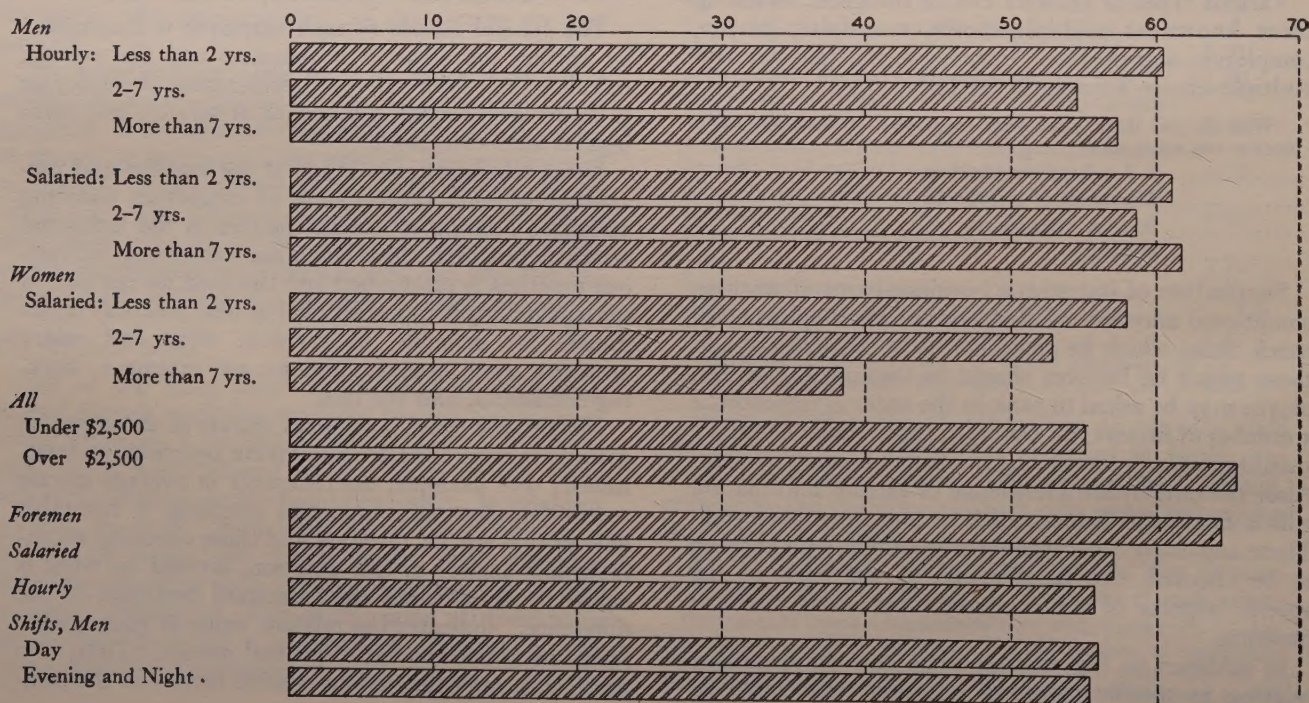
average morale of male employees was somewhat higher than that of the women. The score of female employees with over 7 years' service, employed in the general offices of the company, was especially low, as compared with those of shorter service. Male employees with from 2 to 7 years' service had a lower morale score than those with greater or less service. This suggested the possibility that men who entered the company during the depression had fared worse than those hired earlier or later.

In the salaried group, employees with earnings above \$2,500 had a higher morale than those who earned less. The foremen had a morale score of 64.4, as compared to the morale of 57.5 for all salaried employees, and 56.0 for all hourly workers. In the plant departments, the differences in morale between the day and night shifts were not significant.

Specific Attitudes

In addition to the determination of general morale scores, certain statements in the attitude scale were used to measure employee attitude toward specific factors in personnel policy. The number and per cent of employees checking each statement were calculated, and this information was broken down on the basis of sex, length of service, earnings, type of work, and department. For example, the statement, "I think the company is doing more than they used to toward im-

CHART 1: DIFFERENCES IN AVERAGE MORALE SCORES—VARIOUS CLASSIFICATIONS OF EMPLOYEES



proving working conditions," was checked by 72% of the hourly employees; and the statement, "The setup for handling grievances is terrible," was checked by 30% of these employees.

While such statements in the attitude scale were helpful in determining reactions to specific personnel practices, questions with multiple-choice answers yield even more specific information. Among some of the more significant results were the following:

1. There was a close relationship between departmental morale and attitudes toward supervision and leadership. In fact, supervision and leadership appeared to be the most important determinants of morale. Incidentally, more than one-half of the salaried employees believed that their immediate superiors would give them pay increases if the higher executives would permit. This indicated that the department managers were not assuming the responsibility delegated to them for decisions relating to pay, but instead were "passing the buck" to top management.

2. The feeling that there were many pay inequalities within the company appeared to be one of the most outstanding causes of dissatisfaction among both salaried and hourly-paid workers. This suggested the necessity for wage and salary administration based upon job grading, employee rating, coordination of all pay adjustments in the personnel department, participation of employees in job grading and the establishing of pay schedules, and the continuous education of employees in the specific procedures of pay administration. Although this company had established a plan of salary advancement, more than one-half of the salaried employees indicated that they did not know anything about it.

3. Approximately one-half of the factory workers were dissatisfied with the wage incentive plan. This suggested a need for employee participation in the determination of job standards and piece rates.

4. Seventy per cent of the hourly workers felt that there should be work sharing before lay-offs (see Table 1), and more than one-half of these workers felt that recent lay-offs had been handled fairly.

TABLE 1: RESULTS OF A MULTIPLE-CHOICE QUESTIONNAIRE

WHEN BUSINESS GETS REALLY BAD, WHICH OF THE FOLLOWING STEPS DO YOU THINK THE COMPANY SHOULD TAKE? (Check the *one* you think should be done first).

Hourly Workers

Cut working hours and spread the work to everybody	69.7%
Lay off some people and thus give more hours to those who remain	6.8
Reduce salaries and wages	0.6
No answer	22.9

Total.....100.0%

WHEN BUSINESS GETS REALLY BAD, WHICH OF THE FOLLOWING STEPS DO YOU THINK THE COMPANY SHOULD TAKE? (Check the order in which you believe the steps should be taken—1, 2, 3, 4, 5, 6)

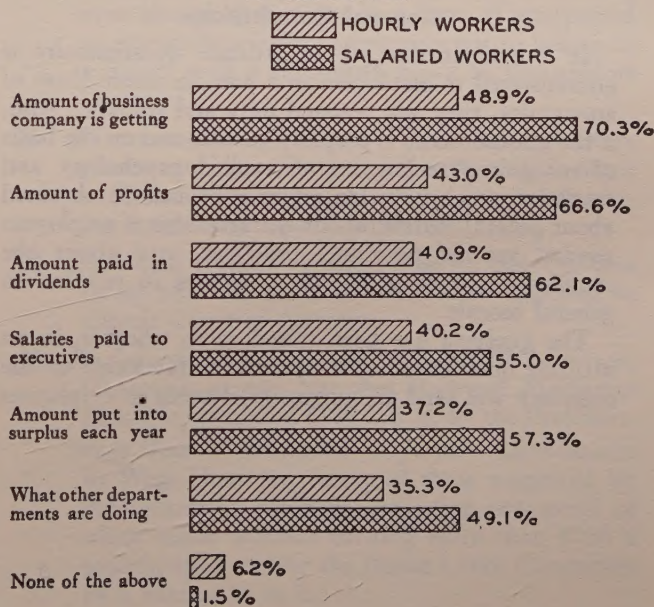
Salaried Workers

	AVERAGE POSITION
1. Reduce or cut out dividends	1.30
2. Cut advertising and sales promotion expense	3.15
3. Reduce salaries	3.29
4. Reduce factory workers' wages	3.66
5. Reduce forces	3.92
6. Take losses and risk going out of business	5.25

5. There was considerable dissatisfaction among the salaried group relative to the fairness of the promotion policies and practices. This suggested the need for better procedures, including the centralization in the personnel department of all changes in an employee's status, the grading of all classes of positions, the systematic rating and follow-up of employees, and the education of employees in the specific procedures of promotion.

6. More than one-half of the salaried employees and one-quarter of the hourly workers thought the annual report of the management to employees a "good idea," and approximately one-fifth of each group found it "fairly interesting." More than one-third of the factory employees thought the literature explaining company labor policies was "fine," but approximately one-fifth felt that the management did not live up to these policies. Furthermore, one-half of the factory salaried employees, including one-half of the foremen, and three-fifths of the general office employees, indicated that they had never understood the company's personnel policies.

CHART 2: INFORMATION ABOUT COMPANY INTERESTING TO EMPLOYEES



7. A test question was included in the questionnaire to determine how well the employees remembered the company profit per dollar of sales. Only a small percentage checked the correct figure. This suggested that merely publishing important information is not employee education. What is needed is a careful follow-up and checking of the information imparted.

8. A large majority of the salaried employees wanted facts about the company. Some of the kinds of information desired are indicated in Chart 2. The most preferred medium for getting this information, as shown in Chart 3, is a company magazine or newspaper.

9. In connection with collective bargaining, 29% of the factory employees thought that the plant management was unfair to organized labor. Only 15%, however, believed that management did not believe in collective bargaining. On the other hand, 23% checked the statement, "I don't really know what collective bargaining is." Twenty-eight per cent thought that the management had hired labor spies, which was not the case. These data indicate again the necessity for continuous employee education.

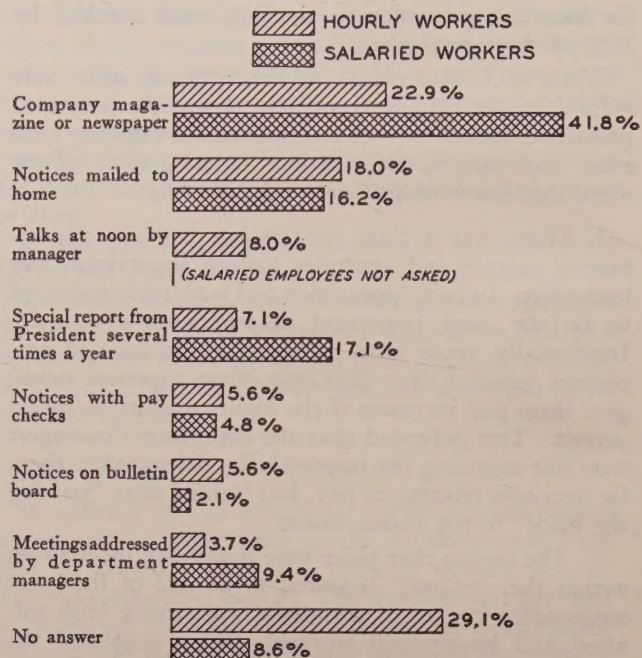
The results of the study clearly demonstrated that the program of employee education should include not only general information about the company, its finances, operations and personnel policies, but also detailed information about its personnel methods and procedures, including those relating to wage and salary administration, promotions, lay-offs and the like. Employees should have confidence in the intentions of management, and should also be convinced that it has the proper methods and skill to carry out its policies wisely and equitably.

General Conclusions

It is evident that, if an attitude questionnaire is administered to employees in a way to assure them of anonymity, they will respond fully and frankly. Also, if the questionnaire is properly constructed on the basis of recognized techniques of applied psychology and statistics, much valuable information can be obtained about general morale, about the attitudes of employees toward specific personnel practices, and about the significance of these specific attitudes in relation to general morale.

The question has been raised as to whether, in an attitude questionnaire, statements unfavorable to the company will tend to suggest grievances to employees

CHART 3: MOST POPULAR MEDIA FOR INFORMATION ABOUT COMPANY



and thus create dissatisfaction. Certain subjects are, of course, potentially dangerous. They must, therefore, be dealt with subtly. For example, it would be unsafe to ask an employee if his pay was "high enough." On the other hand, little risk of generating pay dissatisfaction would attach to a question, with multiple-choice answers, as to how his pay compared to that of employees in other departments of the company or in other companies of his acquaintances, performing tasks of comparable difficulty. Furthermore, an attitude questionnaire gives the employee a chance to express himself freely. If an employee can get a grievance "off his chest," he usually feels better. The use of attitude measurement as a management device, therefore, should improve the attitudes of employees toward the company. Investigation reveals no case where the proper application of attitude measurement has created labor difficulties.

In view of the significant results achieved through sound methods of attitude measurement, it would follow that progressive managements should avail themselves, to an increasing extent, of this useful tool in developing a better industrial relations program.

Chronology of Events Affecting Labor Relations April, 1939

April

- 1 *Rejoins A.F.L.*—Special convention of United Textile Workers of America called for May 8 to re-establish union as affiliate of A.F.L.
- Restricts Picketing*—Supreme Court Justice Cotillo of New York restrains two unions from picketing a restaurant whose employees are members of a third union. He points out that the courts must have the power to enable them to thwart union conduct if its purpose is to induce by pressure the breaking of lawful contracts.
- 3 *Union Assessed Damages*—In Federal District Court in Philadelphia, a jury consisting of eight women and four men finds against Branch No. 1 of the American Federation of Hosiery Workers, affiliate of the C.I.O., and assesses damages of \$237,310 for destruction caused during seven-week sit-down strike in Apex Hosiery Company in 1937. Judge Kirkpatrick orders verdict of \$711,932 for treble damages under the Sherman Anti-Trust Act.
- 4 *Auto Union Reorganizes*—C.I.O. section of United Automobile Workers elects R. J. Thomas president and dispenses with vice presidents.
- 5 *N.L.R.B. Reports*—National Labor Relations Board reports that in its three and a half years of existence it has handled 20,192 cases involving 4,577,303 workers.
- Enforcement Stiffens*—Federal Wage-Hour Act Administrator Andrews warns that the "honeymoon" period of the law's administration is over and that any who attempt to evade compliance will find that the Act has teeth.
- Union Harmony Negotiations Postponed*—Peace committees representing A.F.L. and C.I.O. adjourn without setting definite date for reassembling. C.I.O. delegates fully occupied with negotiations in coal mining industry.
- 7 *Closed Shop Barred*—California District Court of Appeals rules that closed shop union contracts are illegal in California on ground that they infringe individual liberty.
- 10 *Wage-Hour Act Violator Fined*—Vice president of glove-manufacturing concern pleads guilty in Brooklyn, New York, Federal Court for violation of Wages and Hours Act. Judge imposes fine of \$3,000 on each of five counts of indictment but suspends payment of fines on four counts. Requires payment of \$3,000 fine in two weeks.
- 11 *NLRA Hearings Open*—Hearings on the subject of amendment of the National Labor Relations Act open before Senate Labor Committee.
- State Labor Law Upheld*—New York State Court of Appeals in four-to-three decision upholds constitutionality of the State Labor Relations Act.
- 14 *Labor Board Suggests Changes*—In a surprise move, the National Labor Relations Board proposes four possible changes to Wagner Act. The changes concern employer petitions for elections, determination of appropriate bargaining units, invalidation of contracts between an employer and a labor organization, and lengthening of period between complaints and hearings.
- 17 *Auto Union Split Widens*—Homer Martin agrees to sponsor a return to the A.F.L. of his faction of the United Automobile Workers Union.
- 18 *Seniority Protected in Wartime*—A contract entered into between the J. H. Williams Company of Buffalo and the S.W.O.C. provides that absence from duty because of war service shall not interfere with an employee's seniority rights.
- 19 *Truth "Coercive"*—Chairman Madden of N.L.R.B. states before Senate Labor Committee hearing proposals for amending the Wagner Act that it would be an unfair labor practice for an employer to tell his workers, under certain circumstances, that a union representative was a communist, even though that might be a fact. If interpreted as intended to induce employees not to belong to a union, such a statement would be regarded as "coercive."
- 20 *Wisconsin Bans Sit-Downs*—Wisconsin legislature passes new labor relations act outlawing sit-down strikes and limiting picketing to disputes involving majority groups of employees.
- 24 *Apex Case Appeal*—Federal District Court refuses to set aside verdict and case will be appealed to Circuit Court of Appeals.
- 25 *Dr. Leiserson to Labor Board*—William M. Leiserson, Chairman of the National Railroad Mediation Board, is appointed to N.L.R.B. by the President.
- Wage-Hour Amendments Reported*—Amendments to Wage-Hour Act, most of them suggested by Administrator Andrews, including exemption of white collar workers earning more than \$200 a month, approved by the House Labor Committee by a vote of 16 to 2.

The Contest for Foremen

THE prize essay contest for foremen conducted by THE CONFERENCE BOARD closed on April 15 with a response from foremen all over the country that far exceeded the most optimistic estimates of probable participation. All entries postmarked before midnight, April 15, were entered in the contest. Out of fairness to contestants who kept within the time allowed, it was unfortunately necessary to exclude a few entries that did not meet the time requirement. The total number of qualifying entries was 1,915.

For this remarkable participation THE CONFERENCE BOARD is deeply indebted first to the company executives who cooperated so cordially in distributing announcements of the contest to foremen in their companies, and, second, to the competing foremen themselves who took the time to organize their ideas as to what constitutes good foremanship and then wrote out these ideas and contributed them in the form of statements or essays. Entries received ranged in style from penciled comments on scratch paper to manuscripts that in appearance would not suffer in comparison with the thesis of a candidate for a Doctor's degree. All will be read and judged with equal care, since in this contest thoughts and ideas are the paramount consideration. Preliminary examination of a few of the en-

tries indicates that they contain a wealth of constructive thought and are based on a wide range of experience.

The number of entries is so large that time will be required to select the prize-winning statements. As soon as the judges have made their decisions and the prize-winning essays are published (if their authors have no objection to their publication) copies will, of course, be forwarded to all companies and organizations associated with THE CONFERENCE BOARD, and, in addition, a copy will be sent to each foreman who participated in the contest. All entries will then be analyzed in detail to discover what characteristics were most frequently mentioned as essential to good foremanship. From these characteristics will be constructed a list of attributes that should be possessed by the ideal foreman, according to the composite judgment of nearly 2,000 foremen in all parts of the country.

At this time it is possible only to indicate the extent of participation in the contest geographically and by companies. All except nine states are represented and, in addition, 15 entries came from Canada. The largest number of entries came from Ohio, with 255. New York is in second place, with 241 entries. The complete geographical distribution follows:

STATE	NO. OF ENTRIES	STATE	NO. OF ENTRIES	STATE	NO. OF ENTRIES	STATE	NO. OF ENTRIES
Alabama.....	24	Indiana.....	99	Nebraska.....	10	Tennessee.....	26
Arkansas.....	4	Iowa.....	13	New Hampshire.....	11	Texas.....	27
California.....	18	Kansas.....	25	New Jersey.....	90	Vermont.....	4
Colorado.....	2	Kentucky.....	5	New York.....	241	Virginia.....	2
Connecticut.....	40	Louisiana.....	11	North Carolina.....	8	Washington.....	9
Delaware.....	6	Maine.....	1	Ohio.....	255	West Virginia.....	7
Florida.....	4	Maryland.....	180	Oklahoma.....	20	Wisconsin.....	46
Georgia.....	62	Massachusetts.....	46	Oregon.....	5	District of Columbia.....	1
Idaho.....	9	Michigan.....	53	Pennsylvania.....	139	* * *	
Illinois.....	227	Minnesota.....	24	Rhode Island.....	16	Canada.....	15
		Missouri.....	129	South Carolina.....	1		

COMPANY PARTICIPATION

Foremen in 226 companies took part in the contest. The company represented by the largest number of entrants was the Youngstown Sheet and Tube Company, with 245. In second place, with 170, was the Celanese Corporation of America. This company offered a separate set of prizes within its own organization. Essays were submitted in the first instance to the company management, and after company prizes were awarded, all manuscripts were forwarded to THE CONFERENCE BOARD for entry in the national contest. The third largest number of entries came from the International Shoe Company, with 160. The com-

panies represented in the contest and the number of participating foremen in each company are shown below:

COMPANY	NO. OF ENTRIES
Acme Steel Company.....	3
Agfa-Ansco Corporation.....	9
Alabama Dry Docks & Shipbuilding Co.....	1
American Brake Shoe & Foundry Co.....	1
American Enka Corporation.....	3
American Gas Service Company.....	4
American Hard Rubber Company.....	19
American Machine & Foundry Company.....	1
American Optical Company.....	7
American Steel Foundries.....	56
American Zinc Company.....	1
Animal Trap Company of America.....	1
Arkansas-Missouri Power Company.....	2

COMPANY	No. OF ENTRIES
Arlington Mills.....	1
Armstrong Cork Company.....	13
Avondale Mills.....	1
Basic Dolomite Company.....	1
Bayuk Cigars, Inc.....	3
Belden Manufacturing Company.....	3
Belle City Malleable Iron Company.....	1
Bemis Bro. Bag Company.....	15
Bendix Aviation Corporation.....	1
Berger Brothers.....	2
Bibb Manufacturing Company.....	14
Bigelow-Sanford Carpet Company.....	9
Bird and Son.....	1
Boston Edison Company.....	7
Botany Worsted Company.....	1
Brooklyn Edison Company.....	21
Buckeye Steel Castings Company.....	1
Buffalo-Niagara Electric Corp.....	1
Buffalo-Niagara Power Company.....	2
Butler Brothers.....	4
Campbell Soup Company.....	2
Campbell Wyant and Cannon Foundry Co.....	11
Capital Transit Company.....	1
Carborundum Company.....	5
Carnegie-Illinois Steel Company.....	9
Carter Oil Company.....	2
Caterpillar Tractor Company.....	4
Celanese Corporation of America.....	170
Central New York Power Corporation.....	1
Central Power Co. (Nebraska).....	5
Cincinnati Bickford Tool Company.....	2
Cincinnati Milling Machine Company.....	1
Cleveland Graphite Bronze Company.....	2
The Cleveland Press.....	1
Colgate-Palmolive-Peet Company.....	8
Columbian Rope Company.....	2
Combustion Engineering Company.....	13
Congoleum-Nairn, Inc.....	9
Consolidated Edison Co. of N. Y.....	67
Consolidated Telegraph and Electric Subway Company.....	2
Consolidation Coal Company.....	2
Crown-Zellerbach Corporation.....	1
Curtis Manufacturing Company.....	2
Curtis Publishing Company.....	1
Dayton Power and Light Company.....	4
John Deere Tractor Company.....	2
Detroit Steel Casting Company.....	1
Detroit Steel Products Company.....	1
Joseph Dixon Crucible Company.....	2
E. I. du Pont de Nemours & Co.....	3
Eagle Valley Tannery.....	1
Eastman Kodak Company.....	18
Eaton Manufacturing Company.....	2
Eclipse Machine Company.....	2
Thomas A. Edison, Inc.....	5
Egry Register Company.....	1
Elk Tanning Company.....	2
Elgin National Watch Company.....	4
Ensign-Bickford Company.....	7
Erie City Iron Works.....	1
Estate Stove Company.....	1
Fairmont Railway Motors, Inc.....	1
Fansteel Metallurgical Corp.....	1
Farrell-Birmingham Company.....	3
Federal Cartridge Corporation.....	1
Fisher Flouring Mills.....	4
Flinkote Company.....	1
Foote-Burt Company.....	1
Freeport Sulphur Company.....	2
Gardner-Richardson Company.....	1
General Cable Corporation.....	6

COMPANY	No. OF ENTRIES
General Electric Company.....	25
General Fireproofing Company.....	1
General Mills, Inc.....	11
General Shoe Corporation.....	4
General Steel Castings Corp.....	3
Georgia Power Corporation.....	43
Gilbert and Barker Manufacturing Co.....	2
Gladding, McBean and Company.....	1
P. H. Glatfelter Company.....	1
Globe Union, Inc.....	4
Globe Wernicke Company.....	2
B. F. Goodrich Company.....	5
Gould Coupler Corporation.....	2
Great Western Mill & Electric Co.....	1
Gulf States Paper Corporation.....	1
W. F. Hall Printing Company.....	1
Haloid Company.....	8
Hamilton Beach Company.....	1
Hamilton Manufacturing Company.....	7
Hammermill Paper Company.....	2
Hanna Coal Company.....	12
Hartford (Conn.) Electric Light Co.....	3
Hibbard Spencer Bartlett Company.....	1
Hooker Electrochemical Company.....	3
Hope Natural Gas Company.....	1
Ingram-Richardson Manufacturing Co.....	1
Interlake Iron Corporation.....	4
International Agricultural Corp.....	4
International Milling Company.....	15
International Shoe Company.....	160
Iowa Packing Company.....	3
Jefferson Electric Company.....	7
Jeffrey Manufacturing Company.....	2
Johns-Manville Corporation.....	17
Jones and Lamson Machine Company.....	2
Kansas Electric Power Company.....	4
Keystone Steel and Wire Company.....	2
Landis Machine Company.....	1
Lawyers' Cooperative Publishing Co.....	2
Lehigh-Portland Cement Company.....	1
Liberty Foundry, Inc.....	1
Eli Lilly and Company.....	1
Ludlow Manufacturing & Sales Co.....	19
Macwhyte Company.....	2
Marathon Paper Mills Company.....	3
Marion Steam Shovel Company.....	1
McCall Corporation.....	7
Merck, Inc.....	2
Metal and Themit Corporation.....	1
Michigan Gas and Electric Co.....	5
Milwaukee Electric Railway and Transport Company.....	10
Minnesota Power and Light Company.....	2
Missouri Public Service Company.....	1
Monongahela-West Penn Public Service Co.....	1
Moore Steam Turbine Company.....	1
C. F. Mueller Company.....	1
Nashua Gummed and Coated Paper Co.....	2
Nashua Manufacturing Company.....	2
National Cash Register Company.....	2
National Cast Iron Pipe Company.....	2
National Malleable and Steel Castings.....	2
Neuhoff Packing Company.....	1
New York & Queens Electric Light and Power Company.....	24
New York Steam Corporation.....	1
Nordberg Manufacturing Company.....	1
Ohio Public Service Company.....	1
Ohio Rubber Company.....	1

COMPANY	No. OF ENTRIES	COMPANY	No. OF ENTRIES
Oilgear Company.....	1	Sunbeam Electric Manufacturing Co.....	2
Oklahoma Power and Water Company.....	3	Swift and Company.....	7
Oneida Limited.....	1	Talon, Inc.....	8
Osborn Manufacturing Company.....	2	Thew Shovel Company.....	7
Otis Elevator Company.....	16	Seth Thomas Clocks.....	1
Owens-Illinois Glass Company.....	26	Thompson Products, Inc.....	4
Packard Motor Car Company.....	4	Toledo Edison Company.....	3
Penn-Dixie Cement Company.....	3	Underwood Elliott Fisher Company.....	2
Pennsylvania Salt Manufacturing Co.....	8	Union Carbide Company.....	2
Perry Furnace Company.....	3	Union Malleable Iron Company.....	2
Philadelphia Quartz Company.....	1	Union Tanning Company.....	6
Pittsburgh Plate Glass Company.....	19	United States Pipe & Foundry Company.....	9
Ditzler Color Company Division.....	19	United States Rubber Company.....	22
Plaskon Company.....	1	Universal Atlas Cement Company.....	6
Portland General Electric Company.....	3	Universal Crane Company.....	1
Pratt and Whitney Aircraft Corp.....	1	Vermont Marble Company.....	3
Procter and Gamble Company.....	16	Vilter Manufacturing Company.....	1
Pullman, Inc.....	64	Waterbury Farrell Foundry & Machine Co.....	1
Quaker Oats Company.....	6	West Bend Aluminum Company.....	1
RCA Manufacturing Company.....	4	Westchester Lighting Company.....	9
Remington Rand, Inc.....	2	Western Maryland Railway Company.....	5
Revere Copper and Brass Company.....	4	Westinghouse Electric & Mfg. Co.....	41
John A. Roebling's Sons Company.....	7	Weston Electrical Instrument Corp.....	1
Rubberset Brush Company.....	1	Weyerhaeuser Timber Company.....	6
Rundle Manufacturing Company.....	1	Potlatch Forests, Inc.....	9
St. Joseph Lead Company.....	1	Whiting Corporation.....	2
St. Louis Independent Packing Co.....	3	Wilson and Company.....	30
San Antonio Public Service Company.....	4	Wisconsin Electric Power Company.....	2
Schmidt and Ault Paper Company.....	1	Wisconsin Power and Light Company.....	3
Scoville Manufacturing Company.....	7	Worthington Pump and Machinery Corp.....	10
Seagrave Corporation.....	3	Yale and Towne Manufacturing Company.....	4
Servel, Inc.....	2	Youngstown Sheet & Tube Company.....	245
Sharples Corporation.....	1	No company designation.....	27
Shell Oil Company, Inc.....	91		
Signode Steel Strapping Company.....	1		
SKF Industries, Inc.....	2		
Smith Engineering Works.....	2		
L. C. Smith & Corona Typewriter Co.....	1		
Socony-Vacuum Oil Company.....	1		
Southwestern Light & Power Company.....	3		
Standard Oil Company of Ohio.....	13		
John B. Stetson Company.....	5		

THE CONFERENCE BOARD is deeply grateful to all co-operating executives and participating foremen for this splendid response in its effort to learn what the foreman thinks about his job.

Notes on Personnel Administration

Community Chest Problem Solved

A GREAT many companies have experimented with various methods of contributing to the community chests of their cities. Some have sponsored a plan by which each employee gives a day's pay, others have given a lump sum in the name of the company. McCormick and Company of Baltimore have, for the last four years, been using a method that is different from most of the others and has resulted very satisfactorily for all concerned.

The factory employees normally work five days a week and all operations are shut down on Saturday, but at the time of the community chest drive all employees are offered the opportunity to work on two consecutive Saturday mornings. It is explained that the plant is being opened in order to give each one a chance to contribute to the community fund and that each employee

will receive a pay check at his or her normal rate. These are endorsed and sent to the Community Chest by the individuals. The executives of the company match dollar for dollar the total contribution of the employees.

During the last four years, 100% of the employees have taken part in the plan each year. The unanimous backing is, apparently, due to the feeling that it is voluntary, that it offers a way of making a fairly large individual contribution without threatening the family budget and that the idea of actually working at a specific time for those who are in need is one which appeals to everyone.

The atmosphere in the plant on these Saturday mornings would be expected to be a little different than on other days. Men and women are working for nothing

(Continued on page 68)

Five-Day Week Policy in Large Companies

THE CONFERENCE BOARD recently made a rapid survey covering a limited number of large companies in order to determine prevailing policy with regard to

5-day week operation. The results of this survey covering 63 companies are summarized below, followed by a tabulation of the policies of individual companies:

5-Day Week Normal Schedule	Employees, Factory		Employees, Office	
	Number of Companies	Per Cent of Total	Number of Companies	Per Cent of Total
Throughout the year.....	43	68.3	32	50.8
Except at production peaks.....	2	3.2	..	..
During specified part of the year.....	..	..	8	12.7
Except for some exceptions.....	4	6.3	3	4.7
Under special conditions.....	..	..	11	17.5
Not at all.....	14	22.2	9	14.3
Total.....	63	100.0	63	100.0

COMPANY POLICY IN REGARD TO FIVE-DAY WEEK (Names Given by Permission)

Company	5-Day Schedule Applies to			Company	5-Day Schedule Applies to		
	Employees, Factory		Employees, Office		Employees, Factory		Employees, Office
	All Year	Not at All	All Year		All Year	Not at All	All Year
Addressograph-Multigraph Corp.....	X	..	X	Monsanto Chemical Company.....	X	..	X
Allis-Chalmers Corporation.....	X	..	X	National Cash Register Company.....	X	..	X
Colgate-Palmolive-Peet Company.....	X	..	X	Otis Elevator Company.....	X	..	X
Container Corporation of America.....	..	X	X	Owens-Illinois Glass Company.....	..	X	X ²
Corning Glass Works.....	..	X	X	Pure Oil Company.....	..	X	..
Curtis Publishing Company.....	X	..	X	RCA Manufacturing Company.....	X	..	X
Diamond Chain and Manufacturing Co....	X	..	X	Revere Copper and Brass Company.....	X	..	X ³
R. R. Donnelley and Sons Company.....	X	..	X	Royal Typewriter Company.....	X	..	X
E. I. du Pont de Nemours and Company..	X	..	X	Standard Oil Company (New Jersey)	X	..	X
Eastman Kodak Company.....	X	..	X	Standard Oil Company (Ohio).....	X	..	X
General Cable Corporation.....	X	..	1	United Aircraft Corporation.....	X	..	X
General Electric Company.....	X	..	X	Worthington Pump and Machinery Co....	X	..	4
Mergenthaler Linotype Company.....	X	..	X				

¹June, July, August. ²Skeleton force on Saturday. ³June, July, August; skeleton force maintained through rest of year. ⁴June 1 to Labor Day.

COMPANY POLICY IN REGARD TO FIVE-DAY WEEK (Names Withheld by Request)

Industrial Product Group	Employment Group	5-Day Schedule Applies to					Industrial Product Group	Employment Group	5-Day Schedule Applies to				
		Employees, Factory		Employees, Office					Employees, Factory		Employees, Office		
		All Year	Not at All	All Year	Part of Year	Not at All			All Year	Not at All	All Year	Part of Year	Not at All
1. Metal.....	Over 10,000	X	..	X	.....	..	21. Petroleum..	2,500- 5,000	..	X	X	Skeleton force ³	..
2. Metal.....	1,000- 2,500	X	..	X	.....	..	22. Metal.....	2,500- 5,000	X	..	4	.....	..
3. Chemical...	.....	..	X	..	May-Sept.	..	23. Paper.....	1,000- 2,500	X	..	(X—Main office)	.....	..
4. Food.....	2,500- 5,000	..	X	..	Skeleton force June-Sept.	..	24. Chemical..	Under 1,000	X ²	..	..	June, July, August	..
5. Metal.....	Over 10,000	X	..	..	.....	X	25. Building materials.	5,000-10,000	..	X	X	.....	..
6. Metal.....	2,500- 5,000	..	X	..	.....	X	26. Metal.....	2,500- 5,000	X	..	X	.....	..
7. Food.....	2,500- 5,000	X ¹	..	..	.....	X	27. Metal.....	5,000-10,000	X	..	..	May-Sept.	..
8. Chemical...	2,500- 5,000	X	..	..	May-Sept.	..	28. Leather...	Under 1,000	X ¹	..	X ⁵	.....	..
9. Paper.....	1,000- 2,500	..	X	..	.....	X	29. Food.....	Over 10,000	..	X	X ²	.....	..
10. Leather...	Over 10,000	X	..	X	.....	..	30. Petroleum..	Over 10,000	6	..	7	.....	..
11. Food.....	Over 10,000	..	X	..	.....	X ²	31. Food.....	2,500- 5,000	X	..	8	.....	..
12. Rubber...	Over 10,000	X	..	X	.....	..	32. Textile...	1,000- 2,500	X	..	X	.....	..
13. Metal.....	Over 10,000	..	X	..	.....	X	33. Food.....	1,000- 2,500	X	..	..	March 15 to Nov. 1	..
14. Food.....	5,000-10,000	X	..	X	.....	..	34. Electrical..	1,000- 2,500	X	..	X	.....	..
15. Metal.....	5,000-10,000	X ²	..	X ²	.....	..	35. Metal.....	1,000- 2,500	X	..	..	.....	9
16. Metal.....	1,000- 2,500	X	..	X	.....	..	36. Metal.....	5,000-10,000	X	..	..	.....	X
17. Food.....	2,500- 5,000	X	..	..	Skeleton force May 1-Sept. 1	..	37. Petroleum..	5,000-10,000	X	..	X	.....	..
18. Metal.....	5,000-10,000	X	..	..	.....	X	38. Metal.....	2,500- 5,000	..	X	..	.....	X
19. Metal.....	2,500- 5,000	X ²	..	X ²	.....	..					
20. Metal.....	2,500- 5,000	X	..	..	.....	X							

¹Except at peaks.

²Some exceptions.

³Each office employee works one out of every three Saturdays throughout year.

⁴Offices at factories, all year; offices not at factories, May 1 to Nov. 1.

⁵Factory offices operate same hours as plant.

⁶Part of force.

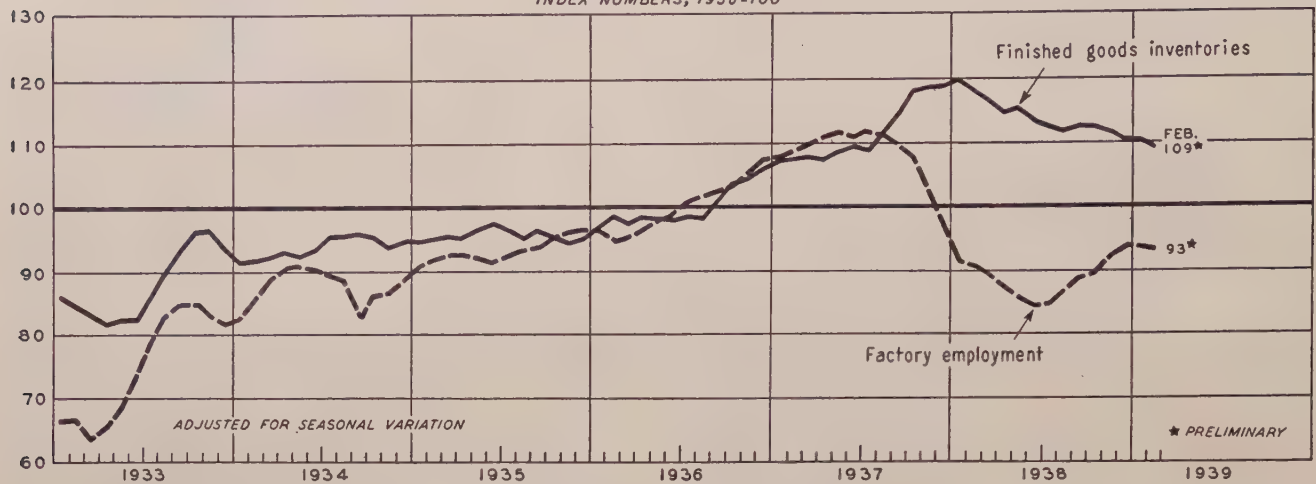
⁷Field office, 5½ days; Principal offices—skeleton force, working one Saturday morning a month.

⁸Skeleton force on Saturdays and holidays.

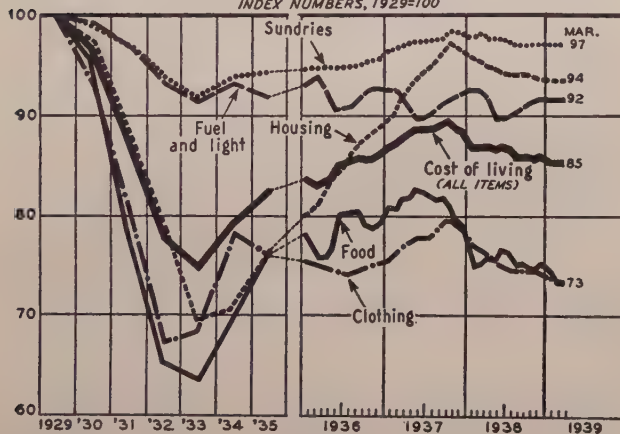
⁹Plant offices, 5½ days; Executive offices, 5 days.

Graphic Facts

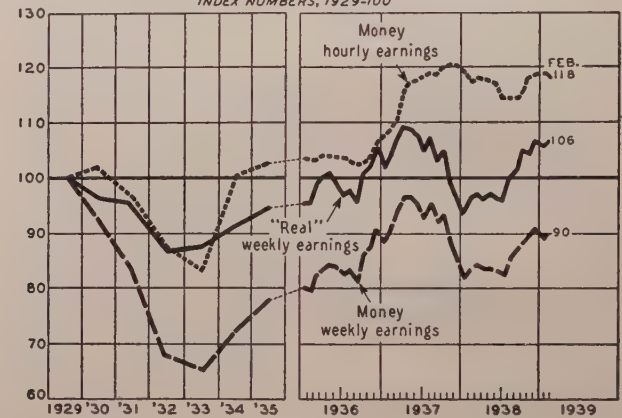
THE CONFERENCE BOARD INDEX OF FINISHED GOODS INVENTORIES, COMPARED WITH FACTORY EMPLOYMENT, 1933-1939
INDEX NUMBERS, 1936=100



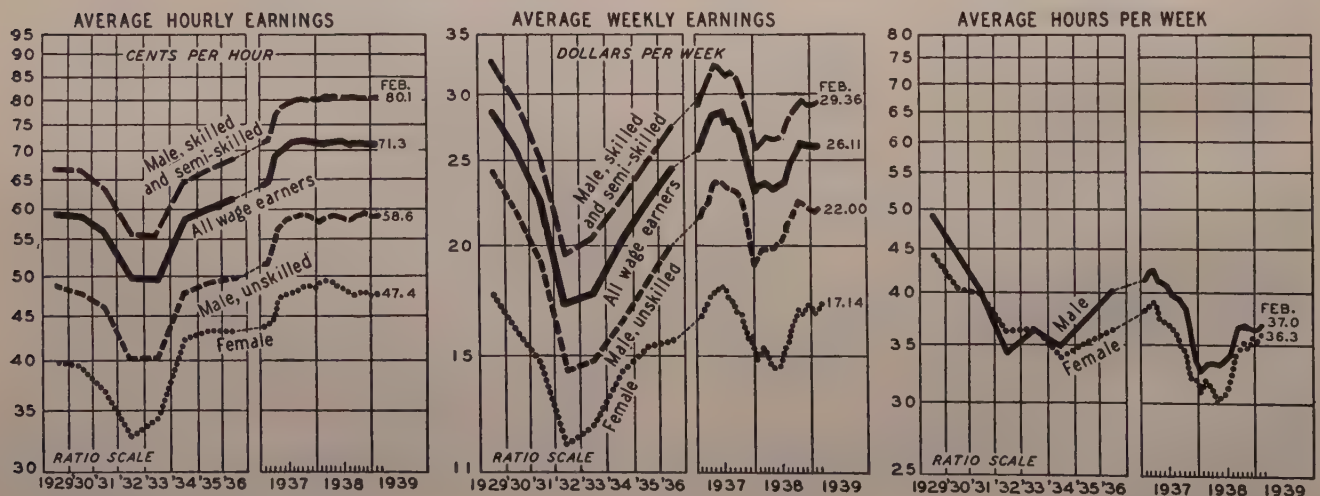
COST OF LIVING CHANGES, 1929-1939
INDEX NUMBERS, 1929=100



MONEY AND "REAL" WEEKLY EARNINGS, MANUFACTURING, 1929-1939
INDEX NUMBERS, 1929=100



AVERAGE EARNINGS AND HOURS, 25 MANUFACTURING INDUSTRIES, 1929-1939



Wages and the Cost of Living

MANUFACTURING activity showed a slight improvement in March, according to reports received by THE CONFERENCE BOARD from manufacturers in 25 industries. Total man hours worked were 0.8% higher than in February, with increases both in the number of workers employed and in the average number of hours worked by them. Increases in total man hours from February to March were found in 16 of the 25 industries. The most substantial gains

were found in the agricultural implement industry, 8.4%, and in the electrical manufacturing industry, 6.6%. In book and job printing, on the other hand, the total number of man hours worked declined 8.0% from February to March. Total man hours worked in the 25 industries combined were 16.4% higher than in March, 1938, but 35.7% lower than in 1929.

There were 0.6% more workers employed in March than in February, 4.3% more workers than in March,

EARNINGS AND HOURS, ALL WAGE EARNERS

MARCH, 1939

INDUSTRY	Average Earnings				Average Hours per Week per Wage Earner			
	Hourly		Weekly		Actual		Nominal	
	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.
Agricultural implement.....	\$.812	\$.811	\$30.54	\$30.10	37.6	37.1	40.3	40.2
Automobile ¹.....	.949	.947	31.16	31.13	32.8	32.9	40.0	40.0
Boot and shoe.....	.516	.521	19.65	19.96	38.1	38.3	40.1	40.2
Chemical.....	.746	.744	28.92	28.93	38.8	38.9	40.2	40.2
Cotton—North.....	.496	.492	18.87	18.86	38.0	38.4	39.9	39.9
Electrical manufacturing.....	.806	.804	30.39	29.57	37.7	36.8	39.8	39.8
Furniture ².....	.662	.651	25.41	24.61	38.4	37.8	40.9	40.9
Hosiery and knit goods.....	.539	.540	20.52	19.88	38.0	36.8	40.0	40.0
Iron and steel ³.....	.829	.827	28.77	27.70	34.7	33.5	40.4	40.2
Leather tanning and finishing.....	.632	.635	24.67	24.87	39.1	39.2	40.4	40.3
Lumber and millwork.....	.655	.654	24.14	24.74	36.9	37.8	42.1	42.0
Meat packing.....	.701	.696	27.07	26.50	38.6	38.1	40.4	40.4
Paint and varnish.....	.713	.714	28.26	27.69	39.6	38.8	40.6	40.6
Paper and pulp.....	.636	.637	25.48	25.63	40.1	40.2	41.3	41.2
Paper products.....	.607	.607	24.22	24.16	39.9	39.8	40.7	40.4
Printing—book and job.....	.824	.814	31.47	31.85	38.2	39.1	40.0	40.0
Printing—news and magazine.....	.954	.951	35.69	35.52	37.4	37.4	39.7	39.7
Rubber.....	.854	.850	29.42	29.34	34.5	34.5	38.2	38.2
1. Rubber tires and tubes.....	1.012	1.010	33.53	33.37	33.1	33.1	37.1	37.2
2. Other rubber products.....	.679	.676	24.46	24.52	36.0	36.3	39.5	39.4
Silk.....	.513	.513	18.05	18.09	35.2	35.3	40.2	40.2
Wool.....	.591	.593	21.54	21.85	36.4	36.8	40.3	40.3
Foundries and machine shops.....	.733	.732	27.31	27.19	37.3	37.2	40.2	40.3
1. Foundries.....	.744	.742	25.47	25.63	34.2	34.5	40.2	40.2
2. Machine and machine tools.....	.744	.742	29.54	29.04	39.7	39.1	41.0	40.8
3. Heavy equipment.....	.784	.784	29.23	29.23	37.3	37.3	40.1	40.1
4. Hardware and small parts.....	.664	.664	25.59	25.52	38.5	38.4	40.3	40.3
5. Other products.....	.731	.730	26.54	26.51	36.3	36.3	39.7	39.7
25 INDUSTRIES.....	\$.715	\$.713	\$26.25	\$26.11	36.9	36.8	40.3	40.3
Cement.....	\$.686	\$.688	\$26.43	\$25.30	38.5	36.8	39.4	39.5
Petroleum refining.....	.991	.991	36.06	36.36	36.4	36.7	36.0	36.0
27 INDUSTRIES.....	\$.718	\$.717	\$26.38	\$26.24	36.9	36.8	40.3	40.3

NOTE: The wage data here given are for cash payments only and do not take into consideration the value of such wage equivalents as reduced or free house rents or other special services rendered by the company to employees. Various forms of wage equivalents are in use in industrial establishments in many localities, but the part which they play as compensation for work performed cannot be taken into account in a study of this character.

¹Based on data collected by the Automobile Manufacturers Association and THE CONFERENCE BOARD.

²Includes wood, metal, and upholstered household and office furniture.

³Based on data collected by the American Iron and Steel Institute and THE CONFERENCE BOARD.

CHANGES IN THE COST OF LIVING, MARCH, 1939

Item	Relative Importance in Post-War Family Budget	Indexes, 1923=100			Percentage Changes	
		March, 1939	February, 1939	March, 1938	February, 1939 to March, 1939	March, 1938 to March, 1939
Food ¹	33	78.0	78.4	80.3	-0.5	-2.9
Housing.....	20	86.1	86.1	87.5	0	-1.6
Clothing.....	12	72.3	72.4	75.5	-0.1	-4.2
Men's clothing.....		78.4	78.3	81.7	+0.1	-4.0
Women's clothing.....		66.2	66.5	69.2	-0.5	-4.3
Fuel and light.....	5	85.8	85.9	86.2	-0.1	-0.5
Coal.....		85.6	85.8	86.1	-0.2	-0.6
Gas and electricity.....		86.2	86.2	86.4	0	-0.2
Sundries.....	30	96.7	96.7	97.8	0	-1.1
WEIGHTED AVERAGE OF ALL ITEMS....	100	84.9	85.1	86.7	-0.2	-2.1
PURCHASING VALUE OF DOLLAR.....		117.8	117.5	115.3	+0.3	+2.2

¹Based on food price indexes of the United States Bureau of Labor Statistics, March 14, 1939, February 14, 1939 and March 15, 1938.

INDEXES OF EARNINGS, EMPLOYMENT, MAN HOURS, AND PAYROLLS, ALL WAGE EARNERS

MARCH, 1939

1923=100

INDUSTRY	Average Earnings						Employment		Total Man Hours Worked		Payrolls	
	Hourly, Actual		Weekly									
			Actual		Real							
	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.
Agricultural implement.....	146.0	145.9	111.0	109.4	130.7	128.6	109.9	102.8	83.5	77.0	122.0	112.5
Automobile ¹	150.2	149.8	103.4	103.3	121.8	121.4	98.1	98.4	67.5	67.9	101.4	101.6
Boot and shoe.....	104.2	105.3	86.9	88.3	102.4	103.8	100.0	99.1	83.6	83.2	86.9	87.5
Chemical.....	147.4	147.0	107.5	107.5	126.6	126.3	109.5	110.0	79.8	80.4	117.7	118.3
Cotton—North.....	111.5	110.6	88.8	88.8	104.6	104.3	40.4	40.1	32.1	32.2	35.9	35.6
Electrical manufacturing.....	141.9	141.5	112.2	109.2	132.2	128.3	83.4	80.1	65.8	61.7	93.6	87.5
Furniture ²	128.0	125.9	101.9	98.7	120.0	116.0	82.3	80.8	65.6	63.3	83.9	79.7
Hosiery and knit goods.....	141.1	141.4	116.1	112.5	136.7	132.2	112.9	112.3	92.7	89.3	131.1	126.3
Iron and steel ³	139.1	138.8	84.1	80.9	99.1	95.1	91.9	91.4	55.2	53.1	77.3	73.9
Leather tanning and finishing.....	130.0	130.7	106.5	107.4	125.4	126.2	79.2	79.8	65.0	65.8	84.3	85.7
Lumber and millwork.....	138.5	138.3	103.1	105.6	121.4	124.1	58.2	57.4	43.4	43.9	60.0	60.6
Meat packing.....	148.2	147.1	115.0	112.6	135.5	132.3	90.7	93.4	70.5	71.6	104.3	105.2
Paint and varnish.....	133.5	133.7	106.4	104.2	125.3	122.4	124.3	122.1	98.8	95.1	132.3	127.2
Paper and pulp.....	126.2	126.4	97.7	98.3	115.1	115.5	106.6	105.5	82.5	81.9	104.1	103.7
Paper products.....	133.1	133.1	111.2	110.9	131.0	130.3	127.0	124.7	106.4	104.2	141.2	138.3
Printing—book and job.....	126.2	124.7	105.1	106.3	123.8	124.9	96.7	102.7	80.5	87.5	101.6	109.2
Printing—news and magazine.....	137.7	137.2	114.3	113.7	134.6	133.6	117.9	117.0	98.0	97.2	134.8	133.0
Rubber.....	136.4	135.8	105.0	104.7	123.7	123.0	73.3	72.3	56.4	55.7	77.0	75.7
Silk.....	103.4	103.4	78.4	78.5	92.3	92.2	89.6	88.7	67.8	67.3	70.2	69.6
Wool.....	117.0	117.4	89.9	91.2	105.9	107.2	78.0	80.1	59.7	62.1	70.1	73.1
Foundries and machine shops.....	127.9	127.7	96.3	95.8	113.4	112.6	78.3	77.2	58.9	57.9	75.4	74.0
1. Foundries.....	126.1	125.8	86.0	86.6	101.3	101.8	59.4	59.9	40.5	41.2	51.1	51.9
2. Machines and machine tools.....	135.5	135.2	108.2	106.4	127.4	125.0	85.9	84.0	68.5	65.9	92.9	89.4
3. Heavy equipment.....	117.0	117.0	88.5	88.5	104.2	104.0	50.9	48.9	38.5	37.0	45.0	43.3
4. Hardware and small parts.....	129.7	129.7	103.1	102.9	121.4	120.9	97.2	96.5	77.2	76.4	100.2	99.3
5. Other products.....	130.5	130.4	97.1	97.0	114.4	114.0	94.6	94.1	70.4	70.0	91.9	91.3
25 INDUSTRIES.....	132.2	131.8	98.6	98.1	116.1	115.3	85.1	84.6	63.8	63.3	83.9	83.0

NOTE: No basic 1923 data are available, hence no indexes are given for the following: rubber tires and tubes, other rubber products, cement, petroleum refining, and "27 industries."

¹Based on data collected by the Automobile Manufacturers Association and THE CONFERENCE BOARD.

²Includes wood, metal, and upholstered household and office furniture.

³Based on data collected by the American Iron and Steel Institute and THE CONFERENCE BOARD.

1938, but 15.7% fewer workers than in 1929. Total payroll disbursements in March were 1.1% higher than in February, 16.0% higher than a year ago, but 22.6% lower than in 1929.

Average hourly earnings increased slightly from 71.3 cents in February to 71.5 cents in March, or 0.3%. They were 0.7% lower than a year ago, but 21.2% higher than in 1929. The average work week was 36.9 hours in March, compared with 36.8 hours in February, an increase of 0.3%. It was 11.8% higher than in March, 1938, but 23.6% lower than in 1929, when the average work week was 48.3 hours.

Average weekly earnings rose from \$26.11 in February to \$26.25 in March, or 0.5%. Although increases

were noted in 15 industries, the increases were not marked; the largest increase was 3.9% in the iron and steel industry. Average weekly earnings in the 25 industries combined were 11.4% higher than in March, 1938, but they were 8.1% lower than in 1929. Real weekly earnings in March, 1939, that is, actual weekly earnings adjusted for changes in the cost of living, were 0.7% higher than in February, 13.6% higher than a year ago, and 8.3% higher than in 1929.

The cost of living declined slightly, 0.2%, from February to March. Living costs in March, 1939, were 2.1% lower than a year ago, 15.2% lower than in 1929, but they were 18.4% higher than at the low point reached in the Spring of 1933.

EARNINGS AND HOURS, ALL MALE AND FEMALE WAGE EARNERS

MARCH, 1939

INDUSTRY	ALL MALE						FEMALE					
	Average Earnings				Average Hours per Week per Wage Earner		Average Earnings				Average Hours per Week per Wage Earner	
	Hourly		Weekly				Hourly		Weekly			
	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.
Agricultural implement.....	\$.815	\$.814	\$30.67	\$30.23	37.7	37.1	\$.612	\$.611	\$21.72	\$21.39	35.5	35.0
Automobile ¹.....	.959	.957	31.46	31.49	32.8	32.9	.702	.701	22.60	23.13	32.2	33.0
Boot and shoe.....	.594	.599	22.56	22.91	38.0	38.2	.411	.416	15.76	15.94	38.3	38.3
Chemical.....	.776	.774	30.03	30.09	38.7	38.9	.539	.541	20.91	20.97	38.8	38.8
Cotton—North.....	.548	.544	21.49	21.56	39.2	39.6	.426	.424	15.58	15.62	36.6	36.9
Electrical manufacturing.....	.861	.858	32.69	31.76	38.0	37.0	.569	.567	20.86	20.28	36.7	35.7
Furniture ².....	.673	.661	25.98	25.18	38.6	38.1	.485	.486	16.98	15.89	35.0	32.7
Hosiery and knit goods.....	.684	.683	27.15	26.28	39.7	38.5	.429	.431	16.13	15.80	37.6	36.6
Iron and steel ³.....	.829	.827	28.77	27.70	34.7	33.5	.....	.....	.....	.....	.....	.....
Leather tanning and finishing.....	.657	.660	25.80	25.94	39.3	39.3	.473	.478	17.91	18.35	37.8	38.4
Lumber and millwork.....	.655	.654	24.14	24.74	36.9	37.8	.....	.....	.....	.....	.....	.....
Meat packing.....	.729	.724	28.31	27.71	38.9	38.3	.542	.537	20.11	19.84	37.1	36.9
Paint and varnish.....	.725	.726	28.78	28.24	39.7	38.9	.528	.527	20.12	19.34	38.1	36.7
Paper and pulp.....	.653	.654	26.18	26.33	40.1	40.3	.423	.423	16.21	16.44	38.3	38.9
Paper products.....	.666	.667	27.06	27.11	40.6	40.7	.454	.452	17.36	17.03	38.3	37.7
Printing—book and job.....	.914	.899	35.74	36.24	39.1	40.3	.516	.522	18.37	18.74	35.6	35.9
Printing—news and magazine.....	1.004	1.002	37.77	37.48	37.6	37.4	.582	.571	20.96	21.12	36.0	37.0
Rubber.....	.953	.948	32.93	32.74	34.6	34.5	.567	.566	19.22	19.44	33.9	34.4
1. Rubber tires and tubes.....	1.048	1.046	35.13	34.97	33.5	33.4	.723	.725	21.99	22.01	30.4	30.4
2. Other rubber products.....	.791	.786	28.85	28.68	36.5	36.5	.519	.517	18.24	18.51	35.2	35.8
Silk.....	.582	.579	20.45	20.51	35.1	35.4	.385	.390	13.61	13.64	35.4	35.0
Wool.....	.637	.641	23.75	24.32	37.3	37.9	.511	.509	17.89	17.85	35.0	35.1
Foundries and machine shops.....	.754	.753	28.18	28.06	37.4	37.3	.478	.478	17.08	17.09	35.7	35.8
1. Foundries.....	.748	.746	25.63	25.78	34.3	34.6	.552	.556	17.64	18.32	32.0	32.9
2. Machines and machine tools.....	.748	.746	29.76	29.25	39.8	39.2	.514	.514	18.41	17.87	35.8	34.8
3. Heavy equipment.....	.784	.784	29.23	29.23	37.3	37.3	.....	.....	.....	.....	.....	.....
4. Hardware and small parts.....	.698	.698	27.01	26.95	38.7	38.6	.458	.459	17.14	17.01	37.4	37.0
5. Other products.....	.772	.772	28.20	28.16	36.5	36.5	.483	.481	16.90	17.02	35.0	35.3
25 INDUSTRIES.....	\$.760	\$.758	\$27.99	\$27.85	37.0	37.0	\$.473	\$.474	\$17.20	\$17.14	36.5	36.3
Cement.....	\$.686	\$.688	\$26.43	\$25.30	38.5	36.8	.....	.....	.....	.....	.....	.....
Petroleum refining.....	.991	.991	36.06	36.36	36.4	36.7	.....	.....	.....	.....	.....	.....
27 INDUSTRIES.....	\$.763	\$.761	\$28.10	\$27.96	37.0	37.0	.....	.....	.....	.....	.....	.....

¹Based on data collected by the Automobile Manufacturers Association and THE CONFERENCE BOARD.

²Includes wood, metal, and upholstered household and office furniture.

³Based on data collected by the American Iron and Steel Institute and THE CONFERENCE BOARD.

EARNINGS AND HOURS, UNSKILLED AND SKILLED AND SEMI-SKILLED MALE WAGE EARNERS
MARCH, 1939

INDUSTRY	UNSKILLED						SKILLED AND SEMI-SKILLED					
	Average Earnings				Average Hours per Week per Wage Earner		Average Earnings				Average Hours per Week per Wage Earner	
	Hourly		Weekly				Hourly		Weekly			
	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.	Mar.	Feb.
Agricultural implement.....	\$.659	\$.651	\$24.58	\$23.59	37.3	36.2	\$.835	\$.834	\$31.49	\$31.09	37.7	37.3
Automobile ¹.....	.785	.787	26.85	26.52	34.2	33.7	.968	.966	31.65	31.78	32.7	32.9
Boot and shoe.....	.416	.420	16.72	16.93	40.2	40.3	.601	.606	22.78	23.09	37.9	38.1
Chemical.....	.690	.689	26.55	26.73	38.5	38.8	.807	.804	31.29	31.31	38.8	38.9
Cotton—North.....	.507	.496	19.32	20.09	38.1	40.6	.564	.564	22.34	22.13	39.6	39.3
Electrical manufacturing.....	.663	.664	25.26	24.63	38.1	37.1	.883	.880	33.55	32.56	38.0	37.0
Furniture ².....	.523	.519	20.03	19.62	38.3	37.8	.710	.697	27.48	26.63	38.7	38.2
Hosiery and knit goods.....	.444	.443	17.88	17.82	40.3	40.2	.703	.701	27.87	26.91	39.7	38.4
Iron and steel ³.....	.634	.630	22.06	22.68	34.8	36.0	.863	.862	29.95	28.45	34.7	33.0
Leather tanning and finishing.....	.549	.558	22.24	22.59	40.5	40.5	.683	.684	26.60	26.70	39.0	39.0
Lumber and millwork.....	.466	.466	18.02	18.73	38.7	40.2	.727	.730	26.41	27.33	36.3	37.4
Meat packing.....	.620	.617	24.03	23.67	38.8	38.4	.783	.773	30.45	29.59	38.9	38.3
Paint and varnish.....	.625	.621	24.75	24.78	39.6	39.9	.779	.783	31.00	29.99	39.8	38.3
Paper and pulp.....	.533	.533	20.32	20.67	38.1	38.8	.693	.694	28.14	28.18	40.6	40.6
Paper products.....	.523	.529	20.88	21.40	39.9	40.5	.726	.727	29.72	29.64	40.9	40.8
Printing—book and job.....	.542	.534	21.70	21.74	40.0	40.7	1.015	1.012	39.45	40.67	38.9	40.2
Printing—news and magazine.....	.613	.619	23.10	22.67	37.7	36.6	1.097	1.088	41.25	40.90	37.6	37.6
Rubber.....	.667	.665	24.83	24.83	37.2	37.4	.963	.958	33.19	32.99	34.5	34.4
1. Rubber tires and tubes.....	.771	.772	27.09	27.20	35.2	35.2	1.055	1.054	35.34	35.18	33.5	33.4
2. Other rubber products.....	.566	.561	22.33	22.25	39.4	39.7	.802	.797	29.14	28.96	36.3	36.3
Wool.....	.522	.520	19.63	19.49	37.6	37.5	.694	.699	25.78	26.63	37.1	38.1
Foundries and machine shops.....	.623	.622	22.76	22.57	36.5	36.3	.777	.776	29.18	29.07	37.5	37.4
1. Foundries.....	.611	.615	21.05	21.63	34.5	35.2	.802	.798	27.42	27.39	34.2	34.3
2. Machines and machine tools.....	.567	.563	22.19	21.59	39.1	38.3	.767	.763	30.53	30.03	39.8	39.3
3. Heavy equipment.....	.633	.630	23.12	22.98	36.6	36.5	.811	.813	30.37	30.43	37.4	37.4
4. Hardware and small parts.....	.568	.567	21.43	21.28	37.7	37.5	.703	.701	27.55	27.32	39.2	39.0
5. Other products.....	.681	.677	24.69	24.04	36.3	35.5	.791	.792	28.94	29.05	36.6	36.7
24 INDUSTRIES ⁴	\$.587	\$.586	\$21.87	\$22.00	37.4	37.8	\$.802	\$.801	\$29.53	\$29.36	37.0	36.8
Cement.....	.572	.574	21.21	20.31	37.1	35.4	.709	.711	27.53	26.37	38.9	37.1
Petroleum refining.....	.706	.722	25.27	26.43	35.8	36.6	1.041	1.039	38.00	38.13	36.5	36.7
26 INDUSTRIES ⁴	\$.589	\$.587	\$21.90	\$22.03	37.4	37.8	\$.806	\$.805	\$29.66	\$29.49	37.0	36.8

¹Based on data collected by the Automobile Manufacturers Association and THE CONFERENCE BOARD.

^{*}Revised.

²Includes wood, metal, and upholstered household and office furniture.

³Based on data collected by the American Iron and Steel Institute and THE CONFERENCE BOARD.

⁴Silk industry not included, as adequate data for unskilled and skilled labor groups are not available for this industry.

Notes on Personnel Administration (Continued from page 62)

to help those in need. It would be surprising, if those hours did not go by rapidly in rather the spirit of "an outing in the plant." That is what one would expect. That is the atmosphere that actually is found. The startling additional factor in the story is that the production records on those two Saturdays are better than on any other days of the year.

Industrial Editors' Group

The important role of the employee publication as a medium for better understanding between workers and management has become widely recognized. Remaking the company gossip sheet into a valuable and effective publication is a task deserving the best attention and intelligent planning.

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